

1. A thermoplastic composition comprising:

from about 1 % by weight to 25 % by weight block copolymer having the formula (A-B) $x$  where the A block comprises polyvinylarene, the B block comprises poly(monoalkenyl), and x is an integer of at least one;

5 from about 45 % by weight to about 75 % by weight superabsorbent polymer particles comprising polyacrylate and having an average particle diameter of from 20  $\mu\text{m}$  to 30  $\mu\text{m}$ ; and

from about 15 % by weight to about 40 % by weight plasticizing oil.

10 2. The thermoplastic composition of claim 1, further comprising surfactant.

3. The thermoplastic composition of claim 21, further comprising from about 1% by weight to about 5 % by weight surfactant.

15 4. The thermoplastic composition of claim 1, comprising from 60 % by weight to about 75 % by weight said superabsorbent polymer.

20 5. The thermoplastic composition of claim 1, wherein the block copolymer is selected from the group consisting of styrene-isoprene-styrene, styrene-ethylene-butylene-styrene, styrene-ethylene-propylene-styrene, styrene-butadiene-styrene and combinations thereof

6. The thermoplastic composition of claim 1, wherein said composition exhibits a water gel time of no greater than 2 minutes.

25

7. The thermoplastic composition of claim 1, wherein said composition exhibits a water gel time of no greater than 1.5 minutes.

30 8. The thermoplastic composition of claim 1, wherein said composition exhibits a water gel time of no greater than 1 minute.

9. The thermoplastic composition of claim 1, wherein said composition exhibits a 0.9 % saline solution gel time of no greater than 4 hours.

10. The thermoplastic composition of claim 1, wherein said composition exhibits a 0.9 % saline solution gel time of no greater than 1 hour.

11. The thermoplastic composition of claim 1, wherein said composition exhibits a 0.9 % saline solution gel time of no greater than 25 minutes.

10 12. The thermoplastic composition of claim 1, wherein said composition exhibits a 0.9 % saline solution gel time of no greater than 10 minutes.

13. The thermoplastic composition of claim 1, wherein said composition exhibits a 0.9 % saline solution gel time of no greater than 5 minutes.

15 14. The thermoplastic composition of claim 1, wherein said composition exhibits an absorbent capacity of at least 60 g water/g of composition.

16 15. The thermoplastic composition of claim 1, wherein said composition exhibits an absorbent capacity of at least 70 g water/g of composition.

16. The thermoplastic composition of claim 1, wherein said composition exhibits an absorbent capacity of at least 90 g water/g of composition.

25 17. The thermoplastic composition of claim 1, wherein said composition exhibits an absorbent capacity of at least 100 g water/g of composition.

18. The thermoplastic composition of claim 1, wherein said composition exhibits an absorbent capacity of at least 110 g water/g of composition.

19. The thermoplastic composition of claim 1, wherein said composition exhibits an absorbent capacity of at least 25 g 0.9 % saline solution/g of composition.

20. The thermoplastic composition of claim 1, wherein said composition 5 exhibits an absorbent capacity of at least 30 g 0.9 % saline solution/g of composition.

21. The thermoplastic composition of claim 1, wherein said composition exhibits an absorbent capacity of at least 35 g 0.9 % saline solution/g of composition.

10 22. A thermoplastic composition comprising:  
block copolymer having the formula (A-B) $x$  where the A block comprises polyvinylarene, the B block comprises poly(monoalkenyl), and x is an integer of at least one;  
superabsorbent particles comprising polyacrylate and having an average 15 particle diameter of from 20  $\mu\text{m}$  to 30  $\mu\text{m}$ ; and  
plasticizing oil,  
said composition exhibiting water gel time of no greater than 2 minutes.

20 23. The thermoplastic composition of claim 22, wherein said block copolymer is selected from the group consisting of styrene-isoprene-styrene, styrene-ethylene-butylene-styrene, styrene-ethylene-propylene-styrene, styrene-butadiene-styrene and combinations thereof

25 24. A thermoplastic composition comprising:  
block copolymer having the formula (A-B) $x$  where the A block comprises polyvinylarene, the B block comprises poly(monoalkenyl), and x is an integer of at least one;  
superabsorbent particles comprising polyacrylate and having an average 30 particle diameter of from 20  $\mu\text{m}$  to 30  $\mu\text{m}$ ; and  
plasticizing oil,

100050375-041600

5  
said composition exhibiting a 0.9 % saline solution gel time of no greater  
than 1 hour.

10  
25. A thermoplastic composition comprising:

block copolymer having the formula (A-B) $x$  where the A block comprises  
polyvinylarene, the B block comprises poly(monoalkenyl), and x is an integer of at  
least one;

superabsorbent particles comprising polyacrylate and having an average  
particle diameter of from 20  $\mu\text{m}$  to 30  $\mu\text{m}$ ; and

15  
10  
plasticizing oil,

said composition exhibiting an absorbent capacity of at least 70 g water/g  
of composition.

20  
26. A thermoplastic composition comprising:

block copolymer having the formula (A-B) $x$  where the A block comprises  
polyvinylarene, the B block comprises poly(monoalkenyl), and x is an integer of at  
least one;

superabsorbent particles comprising polyacrylate and having an average  
particle diameter of from 20  $\mu\text{m}$  to 30  $\mu\text{m}$ ; and

25  
20  
plasticizing oil,

said composition exhibiting an absorbent capacity of at least 25 g 0.9 %  
aqueous saline solution/g of composition.

30  
27. A thermoplastic adhesive composition comprising:

from about 1 % by weight to 25 % by weight block copolymer having the  
formula (A-B) $x$  where the A block comprises polyvinylarene, the B block  
comprises poly(monoalkenyl), and x is an integer of at least one;

from about 45 % by weight to about 75 % by weight superabsorbent  
polymer particles comprising polyacrylate and having an average particle diameter  
of from 20  $\mu\text{m}$  to 30  $\mu\text{m}$ ;

30  
tackifying agent; and

1003025-0150

from about 15% by weight to about 40% by weight plasticizing oil.

28. An absorbent article comprising:  
an absorbent core;  
the thermoplastic composition of claim 1 incorporated in said absorbent  
core.

5

29. An absorbent article comprising:  
an absorbent core; and  
the thermoplastic composition of claim 1 disposed on said absorbent core.

10

30. An absorbent article comprising:  
a liquid permeable sheet;  
a liquid impermeable barrier sheet;  
an absorbent element disposed between the liquid permeable sheet and the  
barrier sheet; and  
the thermoplastic composition of claim 1 disposed on at least one of said  
liquid permeable sheet, said barrier sheet and said absorbent element.

15

20

31. An absorbent article according to claim 32 selected from the group  
consisting of disposable diapers, sanitary napkins, wound care products, wipes, towels and  
tissues.

32. An absorbent article comprising:  
a liquid permeable sheet;  
a liquid impermeable barrier sheet;  
an absorbent element disposed between the liquid permeable sheet and the  
barrier sheet; and  
the thermoplastic composition of claim 1 incorporated in said absorbent  
element.

25

30

DEPT 32050010

33. A thermoplastic composition comprising:  
block copolymer having the formula (A-B) $x$  where the A block comprises polyvinylarene, the B block comprises poly(monoalkenyl), and  $x$  is an integer of at least one;  
5 spherical superabsorbent particles comprising polyacrylate; and  
plasticizing oil,  
said composition exhibiting a water gel time of no greater than 2 minutes, a viscosity of no greater than 100,000 centipoise at 300°F and a wet tensile strength of at least 15 g/in $^2$ .

10 34. The thermoplastic composition of claim 34, wherein said composition exhibits a 0.9 % saline solution gel time of no greater than 1 hour.

15 35. The thermoplastic composition of claim 34, wherein said composition exhibits a 0.9 % saline solution gel time of no greater than 10 minutes.

20 36. The thermoplastic composition of claim 34, wherein said composition exhibits a water gel time of no greater than 1.5 minutes, a viscosity of no greater than 30,000 centipoise and a wet tensile strength of at least 40 g/in $^2$ .

37. The thermoplastic composition of claim 34, wherein said composition exhibits an absorption capacity of at least 70 g water/g composition.

25 38. A thermoplastic composition comprising:  
from about 1 % by weight to 25 % by weight block copolymer having the formula (A-B) $x$  where the A block comprises polyvinylarene, the B block comprises poly(monoalkenyl), and  $x$  is an integer of at least one;  
from about 45 % by weight to about 75 % by weight superabsorbent polymer particles that include polyacrylate; and  
30 from about 15 % by weight to about 40 % by weight plasticizing oil,

said composition exhibiting a water gel time of no greater than 2 minutes, and an absorption capacity of at least 70 g water/g composition and at least 10 g 0.9% saline solution/g composition.